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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/629,759	07/30/2003	Glenn Roy	006943.00107	6813

66811 7590 03/21/2008
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EXAMINER

STULII, VERA

ART UNIT	PAPER NUMBER
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1794

MAIL DATE	DELIVERY MODE
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03/21/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/629,759	Applicant(s) ROY ET AL.	
	Examiner VERA STULII	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3-7,10-13,15-21,24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3-7,10-13,15-21,24 and 25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

The objection of claims 2, 22 and 23 under 37 CFR 1.75, has been withdrawn due to the cancellation of claims.

Claim Rejections - 35 USC § 112

Claims 1, 3-7, 10-13, 15-21, and 24-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claim 1, 20 and 21, the recitation of a selection from a group of elements in a claim should comply with accepted U.S. Patent practice with regard to the recitation of Markush grouping of claim elements. Phrases using “comprising” are open sets, and should recite elements in the alternative (i.e. “comprising A, B, C or D”), whereas closed sets (“consisting of”) should recite elements as “selected from the group consisting of A, B, C and D.” See recitations of a selection from a group in step (a) of claims 1, 20 and 21.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3-7, 10-11, 15-17, 20-21, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263).

ICS (Institute for Coffee Studies) and Horn-Ross are cited as evidence as discussed below.

Akihiko et al discloses pigment fading inhibitor and method for inhibiting fading of pigment using pigment fading inhibitor (Abstract). In regard to claim 1, 20, 21, 22-25 Akihiko et al disclose a food coloring composition comprising pigment color and pigment fading inhibitor (Abstract). Akihiko et al disclose riboflavin, carothene and other pigments, and coffee bean extract as a pigment fading inhibitor (Abstract). Akihiko et al also disclose that color (pigment) is used for food and beverages (Abstract). Regarding “*synthetic* color” limitation, Akihiko et al disclose industrial riboflavin preparation (p.3 [0014]). Akihiko et al disclose that raw coffee beans extract contains 33% of chlorogenic acid (p. 4 [0015]).

As evidenced by ICS, “Green coffee beans contain up to 10% of chlorogenic acids, i.e., various isomers of hydroxy-cinnamoyl esters of quinic acid (a common plant constituent)”. Regarding claim 10, as evidenced by ICS, “Green coffee beans contain up to 10% of chlorogenic acids, i.e., various isomers of hydroxy-cinnamoyl esters of quinic acid (a common plant constituent)”. Regarding claim 11, as evidenced by Horn-Ross, primary sources of coumestrol and lignans include orange juice and coffee (p. 300). Regarding claim 15, as evidenced by Horn-Ross, coffee is a major source of daidzein (isoflavone) (p. 300). Regarding claim 16, Akihiko et al disclose botanical extract (coffee bean). Regarding claims 17, 24, and 25, Akihiko et al disclose that raw coffee beans (green coffee beans) extract contains 33% of chlorogenic acid (p. 2 [0009]; p. 4 [0015]).

Regarding claims 3-7, Akihiko et al teach that concentrations color inhibiting composition and color are not limited, and may be chosen depending on “content and concentration of coloring matter”, preferably 0.001 to 500% of the weight of the coloring matter (p. 3 [0013]).

Since Akihiko teach the use of a botanically derived color stabilizer from coffee extract, and since coffee extract contains chlorogenic acids, isomers of hydroxycinnamoyl esters, coumestrol (coumarin), and daidzein (isoflavone), then coffee extract disclosed by Akihiko meets limitation of chlorogenic acid and cinnamoyl esters recited in claims 1 and 20-21, coumestrol (coumarin) recited in claims 1, 11 and 20-21, and daidzein (isoflavone) recited in claims 1, 15 and 20-21.

Akihiko et al do not disclose colors/pigments as currently recited. However, as disclosed by applicant and understood in the art, each of the originally claimed synthetic colors would be a functional equivalent known in the art. Color additives as taught by Akihiko et al and recited by applicant were known to be added or applied to a food, drug or cosmetic, are capable of imparting color. These color additives were used in foods for the reasons of offsetting color loss due to exposure to light, air, temperature extremes, moisture and storage conditions; correcting natural variations in color; enhancing colors that occur naturally; etc. Since color additives as recited and taught by Akihiko et al are functional equivalents known for the same purpose, it would have been obvious to substitute one for another. It would also have been obvious to substitute one color additive for another based on expectation of similar functions and similar positive results. The concept of preventing color fading using botanically derived color stabilizers

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is taught by Akihiko et al and therefore is shown to be known. Substitution of one color additive with another for the same purpose would not impart any patentable distinction.

Regarding claim 19, Akihiko et al do not disclose that coloring composition contains sorbic acids, aconitic acid, fumaric acid, or maleic acid. However, Akihiko et al disclose that additional substance may be added to coffee bean extract, for example ascorbic acid as a reducing agent (p. 2 [0010]). It was well known in the art that fumaric acid and sorbic acids are strong reducing agents that were used in food industry. One of the ordinary skill in the art would have been motivated to modify disclosure of Akihiko et al and to use fumaric or sorbic acid as a reducing agent as taught by Akihiko et al. One of ordinary skill in the art would have been motivated to do so since Akihiko et al teach adding any reducing agents. One of ordinary skill in the art would also have been motivated to do so, since fumaric acid and ascorbic acid were well known reducing agents.

Claims 12-13 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263) in view of COFFEE (COFFEE: RELATED BEVERAGES).

Akihiko et al is taken as cited above.

Akihiko et al do not disclose use of botanical extracts other than coffee bean extract. It is not clear whether coffee extract contains chalcones and flavones.

COFFEE reference discloses that dandelion root is a well known coffee substitute that is sometimes used to a considerable extent. COFFEE discloses that “dandelion root was known in 1855, and was produces industrially in this century in

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Denmark and Sweden” (p. 12). COFFEE also discloses that similarity of the root with that of chicory has long been recognized (p. 12). COFFEE also discloses that chicory was a well known coffee substitute that is still widely commercially produced (p. 2). COFFEE reference also discloses that hawthorn (the fruits of *Crataegus oxyacantha* L.) were used as a coffee substitute by the German Government in the First World War (p.16).

On pages 6-7 of Specification Applicants state that “In other preferred embodiments, the C6-C3 phenylpropenoic carbonyl compound is selected from cinnamoyl esters, coumarins, chalcones, flavones, chromones, isoflavones, and combinations thereof and may optionally be provided in the form of an extract of a botanical selected from horse chestnut extract, dandelion extract, eucalyptus extract, stringybark extract, saw palmetto extract, honeysuckle extract, hawthorn extract, noni fruit extract, red clover extract, orange extract, buckwheat extract, chamomile extract and combinations thereof” [0021]. Since Akihiko et al disclose pigment fading inhibitor comprising coffee bean extract as an active ingredient, and since dandelion root and hawthorn were well known coffee substitutes, one of the ordinary skill in the art would have been motivated to substitute one coffee material with another coffee material (dandelion or hawthorn), since beans, dandelion root and hawthorn were well known coffee substitutes. Since COFFEE discloses dandelion root extract and hawthorn extract, it also meets limitations of claims 12 and 13 according to Applicants’ disclosure.

Response to Arguments

The rejection under 35 USC § 102 has been withdrawn due to the claims amendments (deletion of riboflavin recitation from claims 1 and 20-21).

Applicant's arguments filed December 17, 2007 have been fully considered but they are not persuasive.

In regard to Applicants' arguments that Akihiko et al do not disclosed synthetic colors as recited in claims 1, 20 and 21 (page 10 of the Reply to the office action mailed October 4, 2007, Applicants are referred to the rejection of claims 1, 3-7, 10-11, 15-17, 20-21, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263) as stated above.

On pages 10-11 of the Reply, Applicants state that Akihiko teaches that the mechanism to prevent color fading is unknown. Examiner respectfully disagrees. Akihiko et al discloses pigment fading inhibitor and method for inhibiting fading of pigment using pigment fading inhibitor (Abstract). The concept of preventing color fading using botanically derived color stabilizers is taught by Akihiko et al and therefore is shown to be known. Further in this regard Applicants are referred to the rejection of claims 1, 3-7, 10-11, 15-17, 20-21, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263) as stated above.

On page 11 of the Reply, Applicants state that "Akihiko teaches away from the instant claims by stating that combinations of different components within the coffee bean extract work synergistically to provide the desired result, as opposed to

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compounds containing a particular base molecular structure, such as a C₆-C₃ phenylpropenoic carbonyl structure as recited in independent claims 1, 20 and 21”.

Examiner respectfully disagrees, as stated above and in the previous Office action, COFFEE reference discloses that dandelion root is a well known coffee substitute that is sometimes used to a considerable extent. COFFEE also discloses that similarity of the root with that of chicory has long been recognized (p. 12). COFFEE also discloses that chicory was a well known coffee substitute that is still widely commercially produced (p. 2). Since Akihiko et al disclose pigment fading inhibitor comprising coffee bean extract as an active ingredient, and since dandelion root and hawthorn were well known coffee substitutes, one of the ordinary skill in the art would have been motivated to substitute one coffee material with another coffee material (dandelion or hawthorn), since beans, dandelion root and hawthorn were well known coffee substitutes. Substitution of one coffee material with another would not impart any patentable distinction.

On page 12 of the Reply, Applicants state that neither Akihiko et al nor COFFEE reference, either alone or in combination, discloses at least the recited synthetic colors or further, provides motivation to stabilize the synthetic colors with the recited compounds (same in regard to rejection of claim 19). In response to this argument Applicants are referred to the rejection of claims 1, 3-7, 10-11, 15-17, 20-21, 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akihiko et al (JP 2001323263) as stated above and to response to arguments as stated above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VERA STULII whose telephone number is (571)272-3221. The examiner can normally be reached on 7:00 am-3:30 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Keith Hendricks can be reached on (571) 272-1401. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

VS

/Steve Weinstein/
Primary Examiner, Art Unit 1794